

OPERATING MANUAL METO-FER[®] AUTOMATION AG

COMPACT GRIPPER TYPE

KZL 12

KZL 20

KZL 25

KZL 32

KZL 50

SERIES FROM 2-16

1. PRODUCT DESCRIPTION

1.1 Introduction

1.1.1. Utilization

The compact grippers are able to execute grip movements in any position. The fingers (Pos.5) make a parallel movement.

1.1.2. Safety Precautions

Before starting to operate the compact gripper KZL (KZL...D), it is necessary to check that no body parts are within the working range of the element.

The maximum supply pressure of 8 bar must not be surpassed.

1.1.3. Danger Area

Any body parts are to be kept out of the working area (stroke area) of the unit in order to avoid mangling.

1.2 Technical Data

1.2.1 Weights and Measurements

See also Sheet 5

Type	A	B	C	D	E	F	G	H min.	H max	J	K	L
KZL 12	28	49.5	40	20	4	7.5		8	15	6	3.5	6-H7
KZL 20	35	55.5	56	24	5.5	3	6	9.5	17.5	8	4.5	8-H7
KZL 25	40	65.5	60	30	5	4	7	10	20	8	4.5	10-H7
KZL 32	60	87.5	90	40	10	8	8	15	31	10	5.5	12-H7
KZL 50	70	102.0	107	50	10	16	16	20	40	11	6.6	15-H7

M	N	O	P	Q	R	S min	S max	T	U	V	W
17	5.5	M4/8	1.2	3.2	10	28	35	M3	25	20	6.2
21	5.5	M4/1 2	1.5	4.2	13	35.5	43.5	M4	25	19.5	8
26	5.2	M5/1 5	1.5	4.2	15	40	50	M5	30	22.5	8
28	14	M6/1 5	2.5	5.2	22.5	60	76	M6	35	26.5	6.2
40	132	M8/1	2.5	6.2	25	70	90	M6	50	39	6.2

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Type	Dimension for Air Connection				Weight Lb.(kg)
	A1	B1	C1	D1	
KZL 12	18.25	9.75	14.5	6	0.3 (0.15)
KZL 20	23.50	11.5	17.5	6	0.4 (0.20)
KZL 25	26	14	19.5	5	0.8 (0.35)
KZL 32	30	30	34	8	2.1 (0.95)
KZL 50	35	35	33	8	3.3 (1.50)

1.2.2. Performance Characteristics

Type	Clamping force at 72.5PSI (5 Bar)	Air consumption for each double stroke at 72.5 PSI (5 Bar)
KZL 12	7 lb. (31 N)	.0002 scf (0.004 NL)
KZL 20	20 lb. (88 N)	.0005 scf (0.014 NL)
KZL 25	31 lb. (137 N)	.0010 scf (0.027 NL)
KZL 32	51 lb. (225 N)	.0025 scf (0.072 NL)
KZL 50	124 lb. (550 N)	.0079 scf (0.224 NL)

NL: Normal Liter

1.2.3 Operating Source

40mm filtered, unoiled or oiled air (dew point 6°C)

Operating pressure P_{min} 3 bar
 P_{max} 8 bar

1.2.4 Connections

Air connections M5 (see sheet 6)

1.2.5 Environment

Temperature 50°F to 122°F (+ 10°C to + 50°C)
 Relative humidity 95% (without condensation of water)
 Purity of the environment air regular working place atmosphere

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1.3 Features

1.3.1 Standard Features

The compact gripper KZL (KZL...D) includes a sensor bracket for checking the end position. It is possible to add this sensor bracket later on by ordering KZL...Q. The inductive proximity sensors are not included.

1.3.2 Special Equipment

The compact grippers KZL (KZL...D) can be equipped with proximity switches (see Meto-Fer® Electronic Catalog Page 15) so you will be able to check open and closed positions.

Gripper	Inductive Proximity Switches
KZL 12 D	IM-004-...-...
KZL 20 D	IM-004-...-...
KZL 25 D	IM-004-...-...
KZL 32 D	IM-006-...-...
KZL 50 D	IM-006-...-...

2. SAFETY REGULATIONS

2.1 In general

See chapters 1.1.1
 1.1.2
 1.1.3

2.2 Specifically

Do not make any changes or modifications to the unit (voids warranty).

3. CONSTRUCTION AND FUNCTION

To check the end position, the compact gripper can be equipped with inductive proximity switches. The stroke (clamp) cannot be adjusted.

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4. INITIAL OPERATION

4.1 Compressed Air

Remove the safety caps from the air connections. In order to regulate the velocity of the movement, we recommend our flow controls DV-M5 (see sheet 5.021).

5. MAINTENANCE

5.1 Introduction

The compact gripper unit does not require any special maintenance procedure
Never use any type of solvents in order to clean the unit.

5.2 Air Supply

The mini linear unit is equipped with **oil-free seals** and can be operated with dry and non-oiled compressed air. If oiled compressed air is used, we recommend:

- Airpress compound SAE 5 (Klueber Order No. 063027)

6. REPAIR

6.1 Introduction

If the unit no longer meets the requirements (leakage, wear, etc.) the defective parts must be replaced.

6.2 Safety Precautions

Before dismantling the unit, it is necessary to check that the compressed air supply is turned off. It is best to disconnect the compressed air supply from the unit.

When repair work is done, only the original spare parts and lubrication must be used.

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6.3 Replacing the Seals

- Remove the housing (Pos.1) by loosening the screws (Pos.206).
- Loosen the screw (Pos.207) and extract the piston (Pos.2).
- Replace the O-Rings (Pos.201 and 202) and the piston seal (Pos.203).
- Grease the cylinder bore and piston rod. (See Chapter 7.2.)
- The parts are then assembled in reverse order as above described.

7. SPARE PARTS LIST

7.1 Spare Parts

When ordering spare parts, the type and serial number of the unit must be supplied.

Seal Kit Order Number 460.100.0302				
Type	Position	Order Number	Description	Quantity
	201	025.100.0320	O-Ring	1 Piece
KZL 12	202	025.100.0160	O-Ring	1 Piece
	203	025.150.0500	Piston Seal	1 Piece

Seal Kit Order Number 460.100.0304				
Type	Position	Order Number	Description	Quantity
	201	025.100.0520	O-Ring	1 Piece
KZL 20	202	025.100.0230	O-Ring	1 Piece
	203	025.150.0550	Piston Seal	1 Piece

Seal Kit Order Number 460.100.0306				
Type	Position	Order Number	Description	Quantity
	201	025.100.0580	O-Ring	1 Piece
KZL 25	202	025.100.0270	O-Ring	1 Piece

	203	025.150.0600	Piston Seal	1 Piece
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Seal Kit Order Number 460.100.0308				
Type	Position	Order Number	Description	Quantity
	201	025.100.0660	O-Ring	1 Piece
KZL 32	202	025.100.0310	O-Ring	1 Piece
	203	025.150.0650	Piston Seal	1 Piece

Seal Kit Order Number 460.100.0309				
Type	Position	Order Number	Description	Quantity
	201	025.100.0795	O-Ring	1 Piece
KZL 50	202	025.100.0420	O-Ring	1 Piece
	204	025.150.0700	Piston Seal	1 Piece

7.2 Lubrication

Grease for seals

Staburag NBU 4 Atemp.
(Klueber Order No. 005 040)